



Rail-mount



Modbus Gateway



Multi Communications



Terminal Power in



RJ45 Ethernet
(POE optional)



MQTT & JSON



Multi Host Support



Multi Features



Host/Webpage Config



Industrial Quality

Version Options



RS485 TO ETH (B)

Common Ethernet port (B)

9 ~ 24V power supply, without isolation protection



RS485 TO ETH (C)

Common Ethernet port (C)

6 ~ 36V power supply, with Electrical isolation



RS485 TO POE ETH (B)

PoE Ethernet port + Electrical isolation

The RS485 TO POE ETH (B) is the hardware upgrade version, supports PoE Ethernet port power supply, with power and signal isolation protection, which is safer for industrial applications. All three versions have the same software functionality.

Signal Isolation Chip

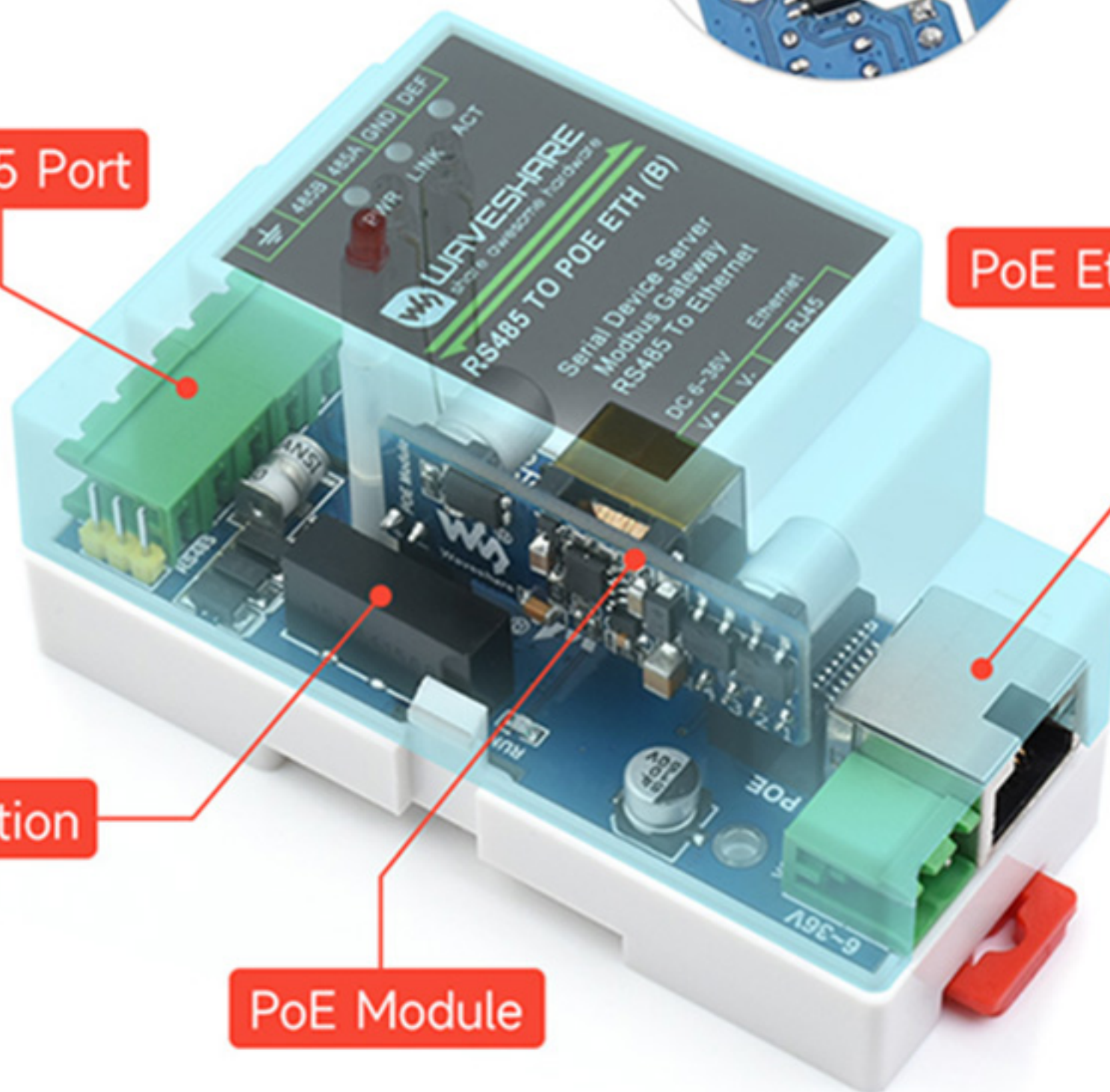
Bottom

RS485 Port

PoE Ethernet Port

Power Isolation

PoE Module



Features At A Glance

This is a RS485 device data acquirer / IoT gateway designed for industrial environment. It combines multi functions in one, including serial server, Modbus gateway, MQTT gateway, RS485 to JSON, etc. The module features RS485 and Ethernet port (POE function is optional), uses screw terminals for power input. Rail-mount case design, small in size, easy to install. It is suitable for applications like data acquisition, IoT gateway, safety & security IoT, and intelligent instrument monitoring...

Specifications

PRODUCT	RS485 TO ETH (B)	RS485 TO ETH (C)	RS485 TO POE ETH (B)	RS232/485/422 TO ETH (B)	RS232/485/422 TO POE ETH (B)
Product Type	Serial server, Modbus Gateway, MQTT Gateway				
Basic Function	Bi-directional transparent data transmission between RS485 and Ethernet			Bi-directional transparent data transmission between RS232/485/422 and Ethernet	
Communication interface	RS485 port x 1, Ethernet port x 1			RS232 port x 1, RS485 port x 1, RS422 port x 1, Ethernet port x 1	
Power supply	9 ~ 24V DC screw terminal	6 ~ 36V DC screw terminal	6 ~ 36V DC screw terminal, or PoE port	DC 5.5 power port, 6 ~ 36V DC screw terminal	DC 5.5 power port, 6 ~ 36V DC screw terminal, or PoE port
Isolation Protection	N/C	Power isolation, Signal isolation			
COMMUNICATION					
Ethernet	common network port		PoE network port, supports IEEE 802.3af standard	common network port	PoE network port, supports IEEE 802.3af standard
	10 / 100M auto-negotiation RJ45 connector, 2 KV surge protection				
Serial port	RS485	Isolated RS485		Isolated RS232/485/422	

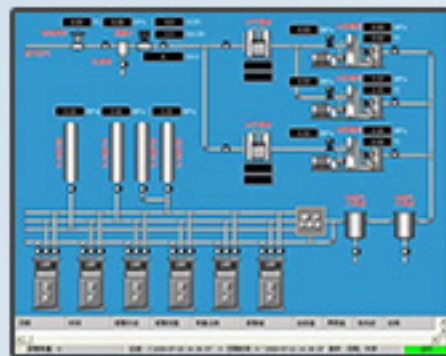
SERIAL SPECIFICATION		
Baudrate	300 ~ 115200 bps	
Parity bit	none, odd, even, mark, space	
Data bit	5 ~ 9 bits	
Flow control	N/A	
SOFTWARE		
Protocol	ETHERNET, IP, TCP, UDP, HTTP, ARP, ICMP, DHCP, DNS	
Configuration	host, web browser, device management functions library	
Communication method	TCP/IP direct communication, VCOM	
Operating mode	TCP server, TCP client (coexisting with TCP server), UDP, UDP multicast	
ENVIRONMENT REQUIREMENT		
Operating temperature	-40℃ ~ 85℃	
Humidity range	5% ~ 95% relative humidity	
Dimensions	L × W × H: 87 × 36 × 59 mm	L × W × H: 88.7 × 72.5 × 24.2 mm

Ethernet

RS485







Configuration software

Modbus TCP



Modbus RTU



User PLC

TCP Server

Supports 30 concurrent TCP connections when used as TCP Server



TCP Server will be listening configured ports and waiting for TCP Client connections, data from the serial device will be transferred via TCP Server to every connected clients

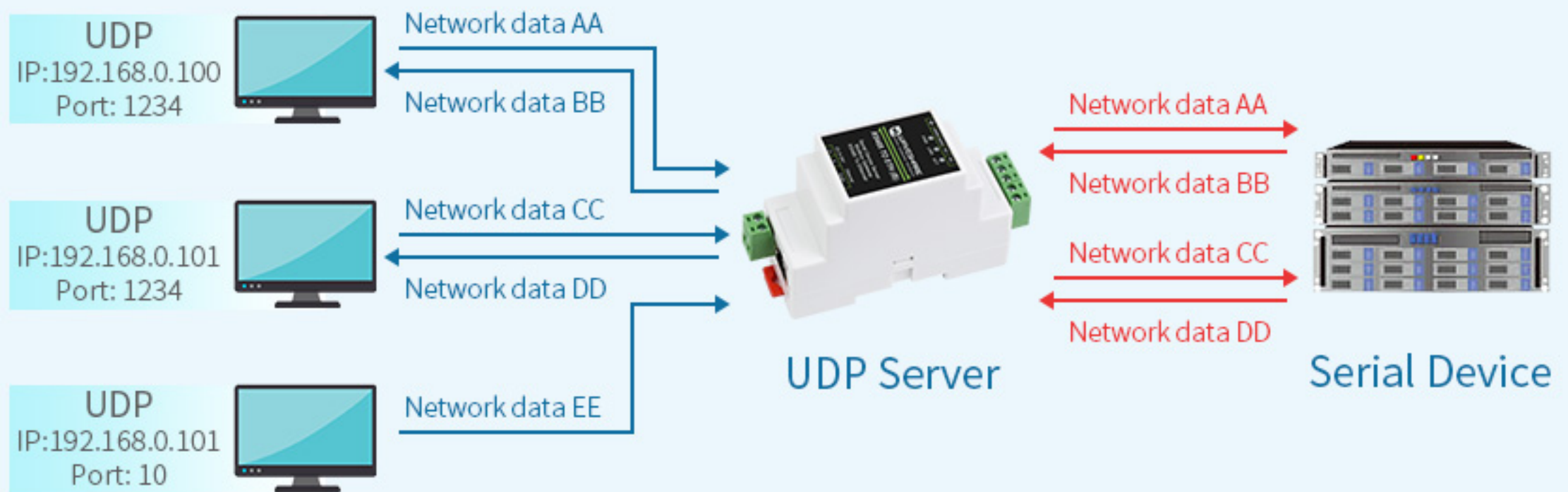
TCP Client

Allows concurrently connecting to 7 target IPs when used as TCP Client



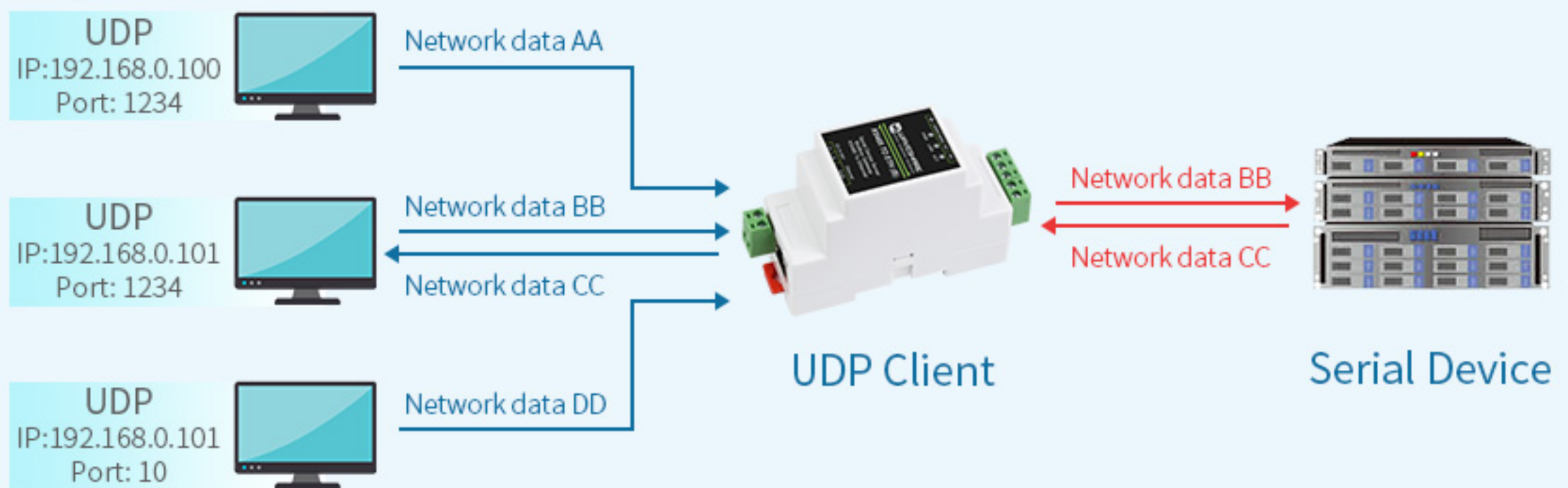
TCP Client will try establishing TCP connection with configured IP to achieve bi-directional transparent transfer between the server and serial device, and keeps retrying if failed

UDP Server



UDP Server will automatically send the received data to the target of previous communication, suitable for multi network devices communicating with the UDP Server

UDP Client



UDP Client will communicate with specific IP and port no. only, thus improving the data transfer accuracy

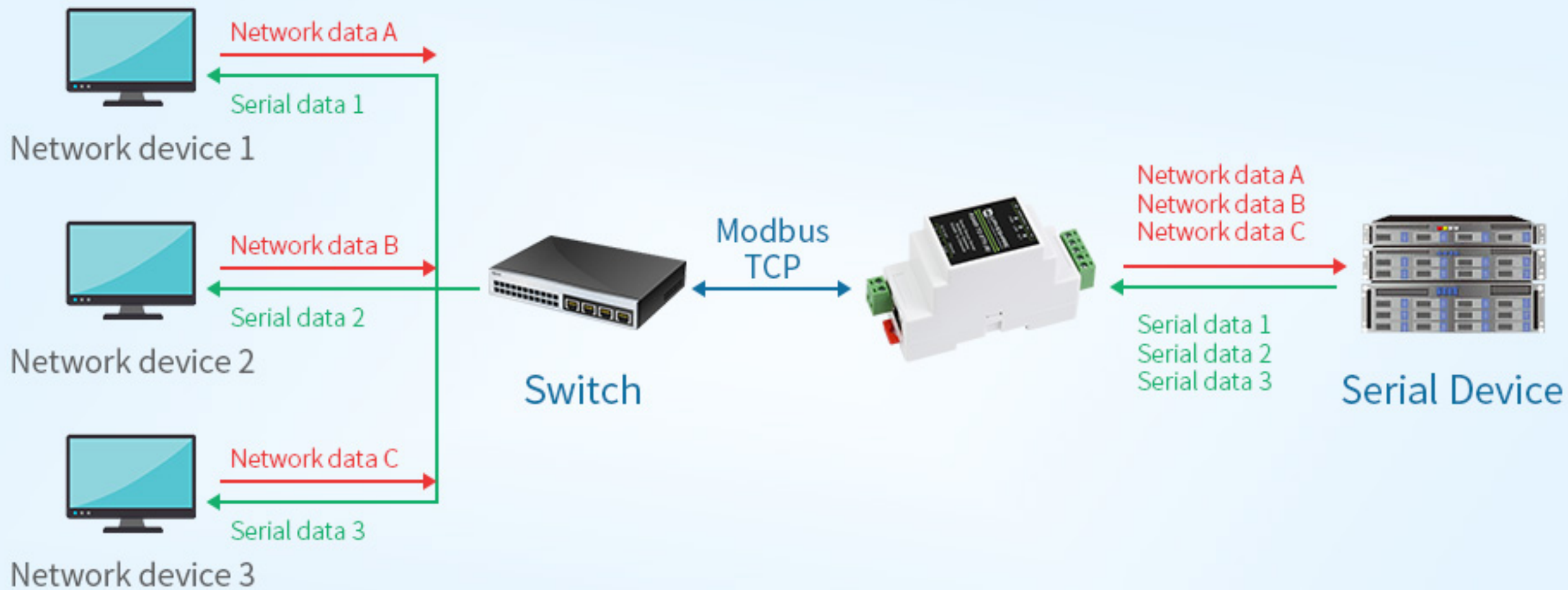
MQTT/JSON To Modbus

More Flexible Conversion Between Different Protocols



When used as MQTT gateway, the devices can upload serial data to MQTT server by MQTT protocol through transparent transmission, supported servers including Baidu Cloud MQTT, Alibaba Cloud MQTT, China Mobile OneNet, etc. The acquired Modbus RTU or non-standard serial data can be parsed into JSON format and packaged into MQTTdata packet for uploading.

When used as JSON data acquisition gateway, the devices can be connected to data acquisition instruments through RS485 connection, then acquire data automatically, convert the data into JSON format, and finally post it to server. The acquired data supports Modbus RTU 645 instrument 97 version, 645 instrument 07 version, as well as sorts of non-standard RS485 protocols. The uploaded data format can be configured via host, and the JSON upload protocol can be MQTT protocol, HTTP POST protocol, HTTP GET protocol, and so on.





user-defined
registration packet

XX XX XX XX XX XX

TCP



Internet

user-defined
heartbeat packet

XX XX XX XX XX XX

TCP



NTP Protocol Support

Getting Network Time Info For Serial Output Or Data Upload

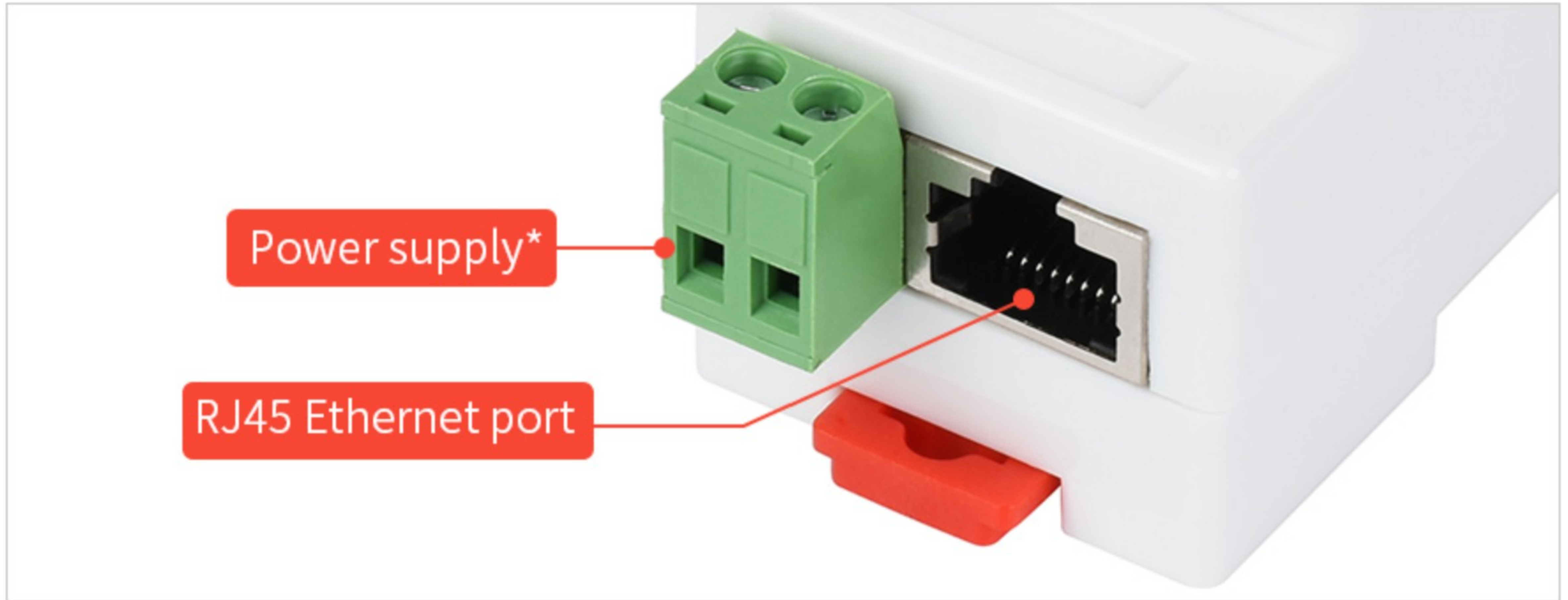


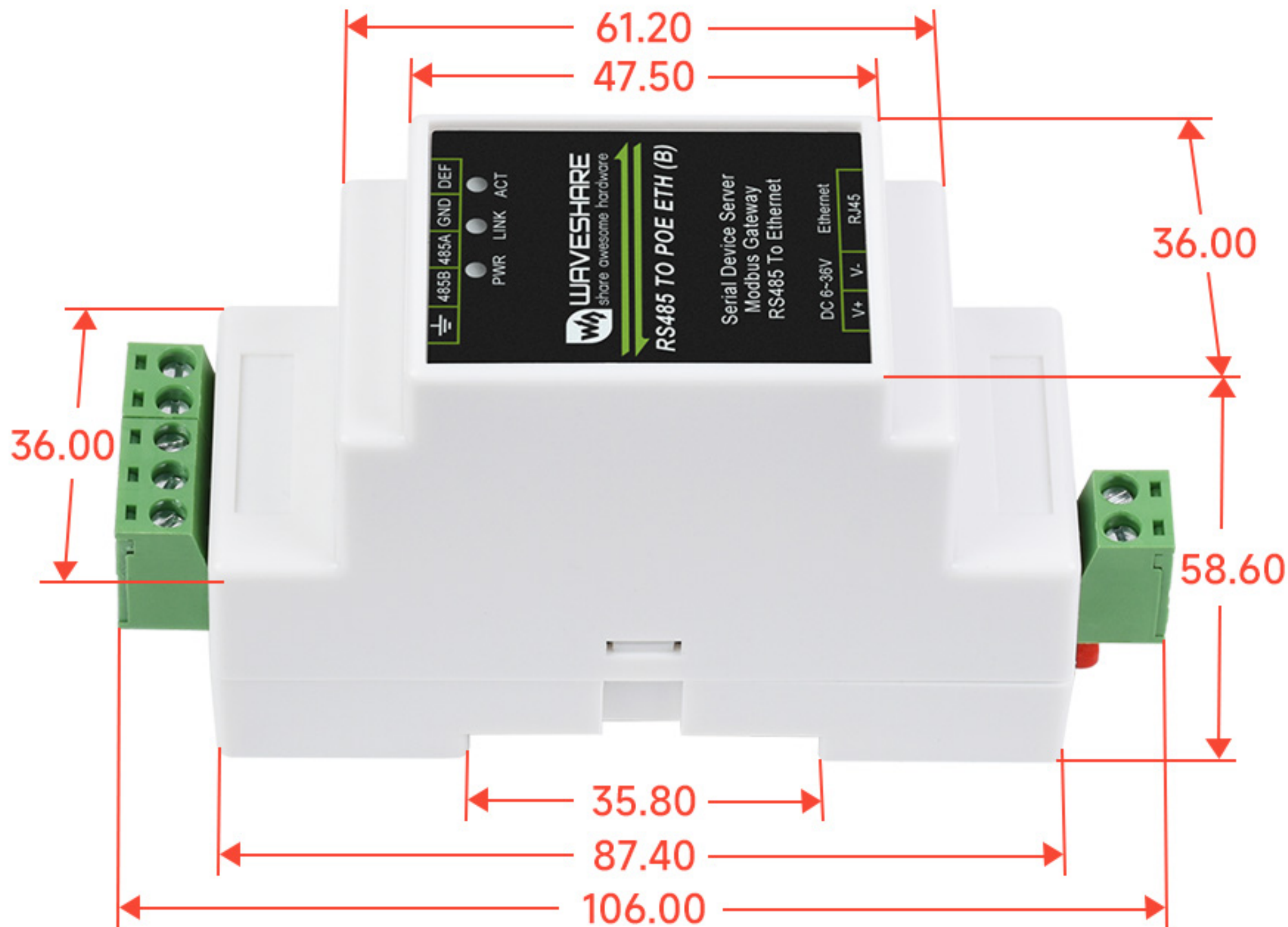
Multi Configuration Methods

Supports Web Browser Configuration, Obtaining Dynamic IP Via DHCP,
DNS Protocol Connected Domain Server Address



Interface Introduction





Unit: mm